

REMARKS

Claims 1 and 5-12 currently are pending. Also, applicants herein file a Notice of Appeal according to 37 CFR 1.191. Claims 5, 6, 8 and 9 have been amended. Claims 11 and 12 have been newly added.

35 USC § 112, second paragraph

The examiner rejected claim 9 as indefinite because of the phrase "preferably from 40 to 99% by weight." While a single claim that includes both a broad and a narrow range may be indefinite, it is not improper under 35 USC § 112, second paragraph, to present a dependent claim that sets forth a narrower range for an element than the range set forth in the claim from which it depends. MPEP § 2173.05(c). Therefore, to overcome the rejection, applicants limit claim 9's component b) to the range 30 to 99.5% by weight and add new claim 11 which depends on claim 9 and recites the narrower range of 40 to 99% by weight.

The examiner rejected claim 8 as indefinite because claim 8 still recites "in particular." To overcome the rejection applicants limit claim 8 to a hair-treatment composition and add new claim 12, directed to a hair spray.

Also, applicants correct minor errors in claims 5 and 6. In claim 5, "M+N" now reads --m+n-- and in claim 6, "F¹⁵" now reads --R¹⁵--.

35 USC § 103(a)

The examiner maintained the rejection of claims 5-9 under 35 USC § 103(a) as being unpatentable over Mita et al. (US 5,278,269) in view of Ribba (US 4,800,220). The examiner argues that the polymers of the present invention are not strictly anionic or anionogenic, as claim 6 section m includes R¹⁰ with terminal amino groups.

Applicants respond by pointing out that claim 5 is directed to preferred embodiments of urethane (meth)acrylates e2) which contain at least one compound with free NCO-groups and at least one compound with alkylene oxide groups (inter alia compounds m)) in **incorporated** form. This means the secondary or tertiary amino groups of compound m) are reacted with an isocyanate group to yield a urea linkage.

The examiner also maintained that Ribba et al. suggests a combination of compounds corresponding to components a) and d) of the present invention. Applicants never denied that components a) and d) of the present invention fall within the general definition of components c) and d) of Ribba et al. However, Ribba et al. does not teach the combination of 40 to 80% by weight of tert-butyl(meth)acrylate (a) and from 1 to 30% by weight of at least one ethylenically unsaturated compound having at least one C₈- C₃₀-alkyl or - alkylene radical d). In fact, none of the examples of Ribba et al. refers to a polymer on the basis of t-butyl(meth)acrylate. Col. 4, lines 15-44 does not teach any preference of monomers corresponding to components a) and d) of the present invention, let alone a combination thereof.

Applicants' examples show that the combination of a) and d) is critical for the present invention. Comparative example C5 (specification, p. 30, table 2) refers to a polymer prepared without a monomer d). As one can see from table 4 on pages 32-33 of the specification, the elasticity of a film from this polymer is poor (A= 3-4) and the grade for tackiness (B=2) and smoothness (C=2-3) each correspond to the lowest grades for polymers of the invention.

Applicants believe the present invention is not obvious in view of a combination of Ribba and Mori. As already pointed out, Ribba fails to suggest the combination of components a) and d) of the present invention. Applicants mention Mori on page 4, lines 1-29 of the specification of the present invention. Mori does not describe polymers on the basis of **tert**-butyl (meth)acrylate. Butyl (meth)acrylate disclosed on page 4, line 34, of course, means **n**-butyl (meth)acrylate. This can be inferred from the fact that isobutyl (meth)acrylate is also mentioned, which means that Mori deliberately excluded **tert**-butyl (meth)acrylate.

For the reasons expressed above, it is urged that the prior art references cited by the examiner either singly or in combination fail to anticipate or suggest the present invention as defined by the amended claims. Accordingly, a *prima facie* case of obviousness has not been established by the examiner, and the rejection under 35 USC § 103 should be withdrawn.

Attached is a check in the amount of \$1240.00 to cover the Notice of Appeal and three-month extension fees.

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Please charge any shortage in fees due in connection with the filing of this paper, including Extension of Time fees to Deposit Account No. 11-0345. Please credit any excess fees to such account.

Respectfully submitted,
KEIL & WEINKAUF



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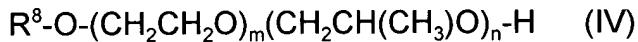
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Please amend claims 5, 6, 8, 9 and newly added claims 11 and 12 as follows:

5. (twice amended) A composition as claimed in claim 1, where component e2) comprises, in incorporated form, the following compounds: f, g and h; or f, h, i and m; or g and l; or i, l and m; or f, i, l and m; or f, h, k and m and optionally other compounds, where

- f) is at least one diisocyanate,
- g) is at least one compound of the formula IV



in which the order of the alkylene oxide units is arbitrary,

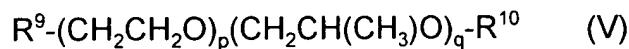
R^8 is a straight-chain or branched C_8-C_{30} -alkyl radical,

m and n independently of one another are an integer from 0 to 50, the sum

[M+N] m+n being at least 5,

- h) is at least one α,β -ethylenically unsaturated compound which, per molecule, additionally contains at least one group which is reactive toward isocyanate groups,
- i) is a compound chosen from monohydric alcohols, diols, amines, diamines and aminoalcohols having at least one straight-chain or branched C_8-C_{30} -alkyl or -alkylene radical per molecule, and mixtures thereof,
- k) at least one aliphatic, cycloaliphatic or aromatic monoisocyanate,
- l) is at least one α,β -ethylenically unsaturated compound which additionally contains at least one isocyanate group per molecule,

- m) is at least one compound of the formula V



in which

the order of the alkylene oxide units is arbitrary,

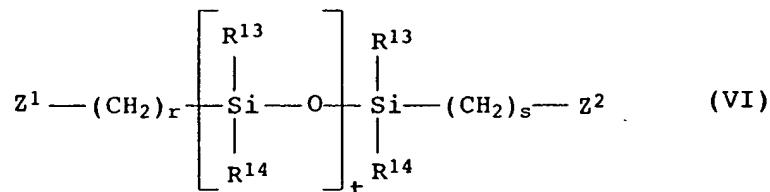
p and q are as defined above for m and n,

R⁹ is OH or NHR¹¹, where R¹¹ is hydrogen, C₁-C₈-alkyl or C₅-C₈-cycloalkyl,

R¹⁰ is H, CH₂CH₂NHR¹¹ or CH₂CH(CH₃)NHR¹¹.

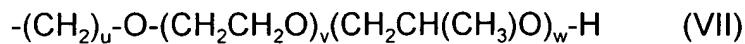
6. (amended) A composition as claimed in claim 5, where component e2) additionally comprises, in incorporated form, at least one component chosen from

- n) compounds having a molecular weight in the range from 56 to 300 which contain
two active hydrogen atoms per molecule,
- o) polytetrahydrofurans having two active hydrogen atoms per molecule,
- p) polysiloxanes of the formula VI



in which

R¹³ and R¹⁴ independently of one another are C₁-C₄-alkyl, benzyl, phenyl or a radical of the formula VII



where

in the formula VII the order of the alkylene oxide units is arbitrary,

u is an integer from 1 to 8,

v and w independently of one another are an integer from 0 to 200, the sum v + w being > 0,

Z¹ and Z² independently of one another are OH, NHR¹⁵ or a radical of the formula VII, where [F¹⁵] R¹⁵ is hydrogen, C₁-C₆-alkyl or C₅-C₈-cycloalkyl,

r and s independently of one another are from 2 to 8,

t is from 3 to 50,

and mixtures thereof.

8. (amended) A composition as claimed in claim 1 in the form of a hair-treatment composition[, in particular in the form of a hair spray].

9. (twice amended) A composition as claimed in claim 1, comprising

- (a) from 0.5% to 20% by weight of a water-soluble or -dispersible polymer as defined in claim 1,
- b) from 30 to 99.5% by weight, [preferably from 40 to 99% by weight,] of at least one solvent chosen from water, water-miscible solvent and mixtures thereof,
- c) from 0 to 70% by weight of a propellant
- d) from 0 to 10% by weight of at least one water-soluble or -dispersible hair polymer which is different from a),
- e) from 0 to 0.3% by weight of at least one water-insoluble silicone,

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- f) from 0 to 1% by weight of at least one nonionic, siloxane-containing, water-soluble or -dispersible polymer.

Please add new claims 11 and 12 as follows.

11. (newly added) A composition as claimed in claim 9, wherein component b) is from 40 to 99% by weight.
12. (newly added) A composition as claimed in claim 1, in the form of a hair spray.